



US007126626B2

(12) **United States Patent**
Sawahara et al.

(10) **Patent No.:** **US 7,126,626 B2**
(45) **Date of Patent:** **Oct. 24, 2006**

(54) **MULTIFUNCTIONAL MOBILE
ELECTRONIC DEVICE**

(75) Inventors: **Shingo Sawahara**, Higashihiroshima
(JP); **Seiji Kurokawa**,
Higashihiroshima (JP); **Hirokazu**
Machide, Onomichi (JP); **Makoto**
Sasaki, Higashihiroshima (JP)

(73) Assignee: **Sharp Kabushiki Kaisha**, Osaka (JP)

(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 0 days.

EP	1408673 A2	4/2004
JP	8-88841 A	4/1996
JP	08-331424 A	12/1996
JP	10-257460 A	9/1998
JP	10304293 A *	11/1998
JP	10-336498 A	12/1998
JP	11-069214 A	3/1999
JP	2001-169166 A	6/2001
JP	2001-186396 A	7/2001
JP	2001-238111 A	8/2001
JP	2001-251544 A	9/2001
JP	2002-176577 A	6/2002
JP	2002-204296 A	7/2002
JP	2002-300237 A	10/2002
JP	2002-300550 A	10/2002

(21) Appl. No.: **10/791,851**

(Continued)

(22) Filed: **Mar. 4, 2004**

OTHER PUBLICATIONS

(65) **Prior Publication Data**

US 2004/0174430 A1 Sep. 9, 2004

Machine translation for JP 2003-298884 A (Kitamura et al).*

(Continued)

(30) **Foreign Application Priority Data**

Mar. 7, 2003 (JP) 2003-061124

Primary Examiner—Stella Woo

(74) *Attorney, Agent, or Firm*—Birch, Stewart, Kolasch &
Birch, LLP

(51) **Int. Cl.**

H04M 11/00 (2006.01)

(57)

ABSTRACT

(52) **U.S. Cl.** **348/14.02**; 455/556.1

(58) **Field of Classification Search** 348/14.02,
348/552, 373, 375, 376; 455/556.1, 557;
379/110.01

See application file for complete search history.

The main body section and the cover section, those of which are combined with the coupling section so that the electronic device can pivot, constitute the present invention. There is an input key section is provided in the opposed surface of the main body section meeting the cover section when the device is folded. There is the main display section provided in the opposing surface of the cover section meeting the main body section when the device is folded. Because of this, the electronic device can be used easier as a mobile phone. Furthermore, the electronic device also can be used easier as a still camera because the device can be used as a still camera immediately whenever the user wants to, even when the electronic device is in stand-by mode of mobile phone mode.

(56) **References Cited**

U.S. PATENT DOCUMENTS

6,510,325 B1	1/2003	Mack, II et al.
2002/0142810 A1	10/2002	Kawasaki et al.
2003/0036365 A1	2/2003	Kuroda
2004/0048633 A1 *	3/2004	Sato et al. 455/556.1
2005/0085263 A1 *	4/2005	Kim et al. 455/556.1

FOREIGN PATENT DOCUMENTS

EP 1 111 919 A2 6/2001

63 Claims, 7 Drawing Sheets

